

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: DORRS POND	Lake Area (ha): 7.12
Town: MANCHESTER	Maximum depth (m): 2.9
County: Hillsborough	Mean depth (m): 1.3
River Basin: Merrimack	Volume (m <sup>3</sup> ): 92000
Latitude: 43°00'57" N	Relative depth: 1.0
Longitude: 71°27'15" W	Shore configuration: 1.69
Elevation (ft): 270	Areal water load (m/yr): 40.29
Shore length (m): 1600	Flushing rate (yr <sup>-1</sup> ): 31.20
Watershed area (ha): 596.0	P retention coeff.: 0.39
% watershed ponded: 0.5	Lake type: natural w/dam

BIOLOGICAL:

		12 January 1998	17 July 1997
DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 60%	MALLOMONAS 45%
	#2	(ALL ALGAE SPARSE)	CERATIUM 40%
	#3		DINOBRYON 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.84
DOM. ZOOPLANKTON (% TOTAL)	#1	DAPHNIA 61%	KERATELLA 65%
	#2	(ZOOPLANKTON SPARSE)	ROTIFER SPP. 9%
	#3		BOSMINA 6%
ROTIFERS/LITER			4413
MICROCRUSTACEA/LITER		28	534
ZOOPLANKTON ABUNDANCE (#/L)		46	5316
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			1.3
BOTTOM DISSOLVED OXYGEN (mg/L)		10.7	0.0
BACTERIA (E. coli, #/100 ml)	#1		11
	#2		32
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : 6500

**CHEMICAL:**

Lake: DORRS POND

Town: MANCHESTER

	12 January 1998		17 July 1997		
DEPTH (m)	1.5		1.0		2.0
pH (units)	6.4		7.1		6.8
A.N.C. (Alkalinity)	13.7		22.2		22.6
NITRATE NITROGEN	0.60		0.06		0.05
TOTAL KJELDAHL NITROGEN	0.40		0.70		0.80
TOTAL PHOSPHORUS	0.020		0.031		0.041
CONDUCTIVITY ( $\mu\text{mhos/cm}$ )	644.0		469.0		458.0
APPARENT COLOR (cpu)	33		58		70
MAGNESIUM			2.73		
CALCIUM			14.5		
SODIUM			72.4		
POTASSIUM			2.56		
CHLORIDE	175		129		127
SULFATE	21		12		12
TN : TP	50		25		21
CALCITE SATURATION INDEX			1.7		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1997**

D.O. S.D. PLANT CHL TOTAL CLASS

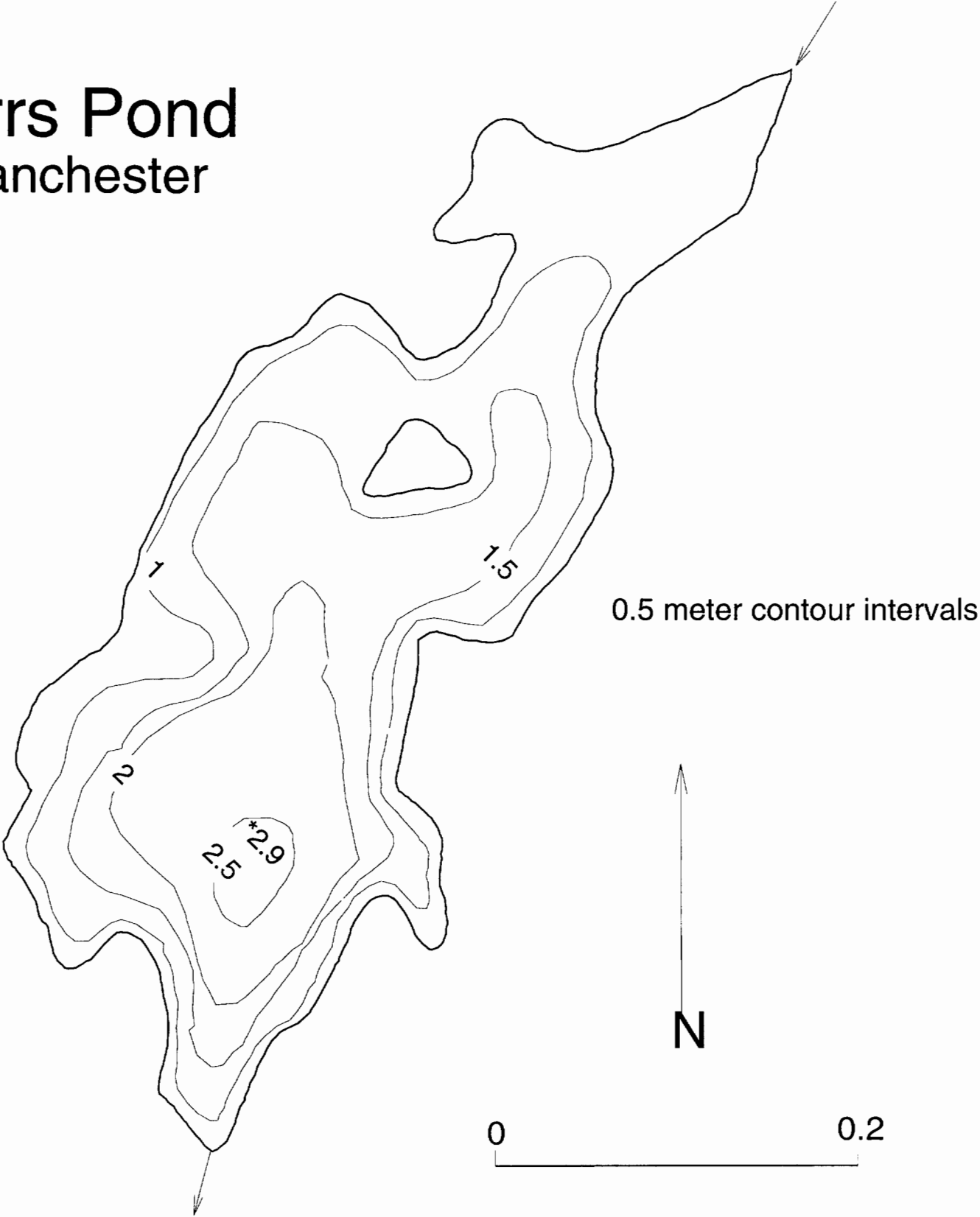
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**COMMENTS:**

1. Dorrs Pond was the subject of a diagnostic study in 1981 and was classified eutrophic at that time. It was also placed on the impaired waters list because of the high 1981 chlorophyll value. It was borderline mesotrophic/eutrophic in 1997 (one more trophic point would have placed it in the eutrophic category). The main water quality change was in chlorophyll, going from 32 mg/m<sup>3</sup> in 1981 to less than 5 mg/m<sup>3</sup> in 1997. More frequent sampling is needed to determine if that is a stable trend.
2. This is an urban pond subject to extensive stormwater runoff from highways, shopping centers and other impervious surfaces. The extremely high conductivity, chloride and sodium (and other cations) levels reflect this urban runoff.
3. No boat launch. City park with picnic facilities adjacent to the pond.

# Dorrs Pond

## Manchester



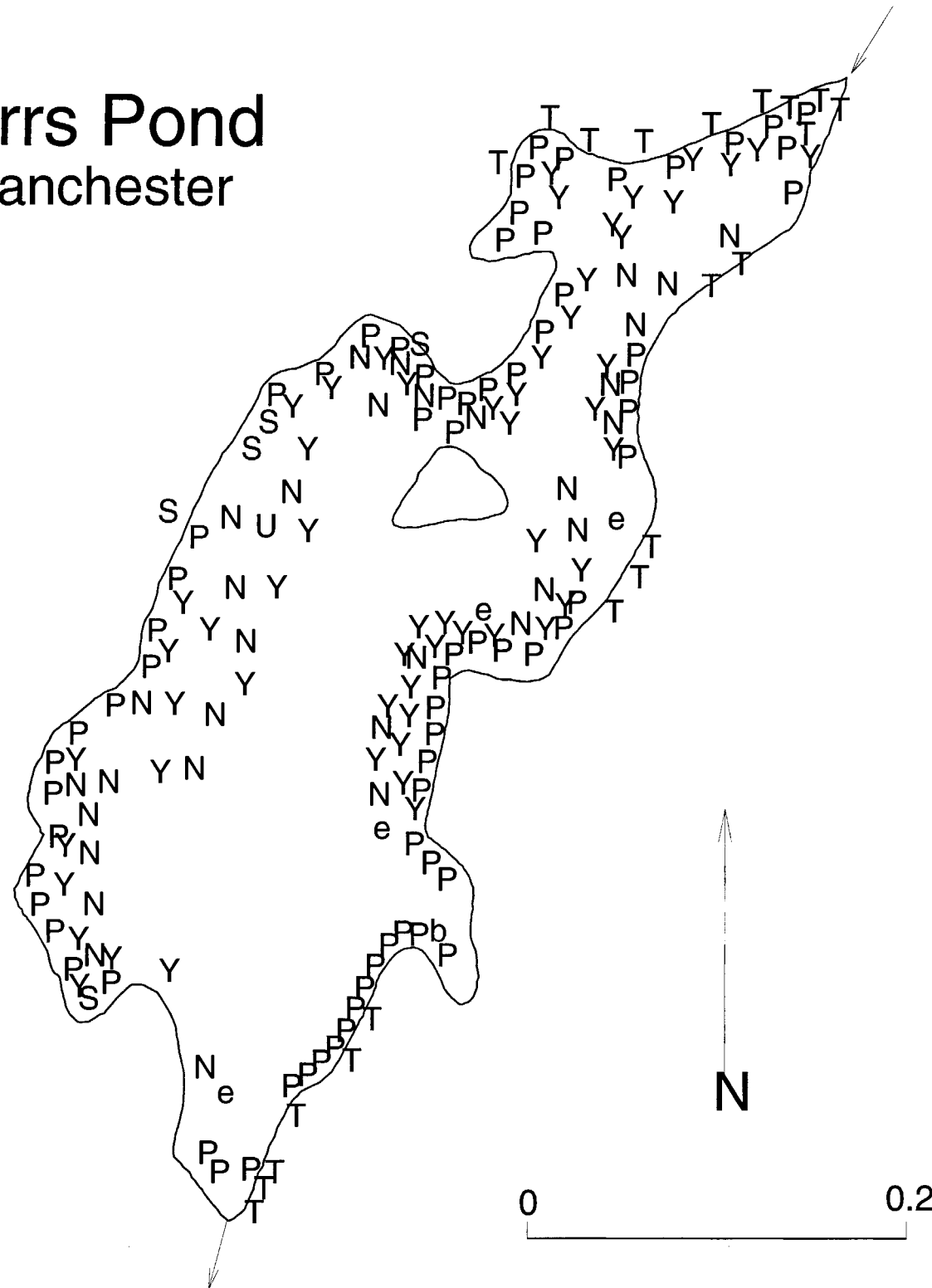
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\*Dissolved oxygen values are in mg/L

# Dorrs Pond

## Manchester

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